PTO(SBR)1 (09-04)

Augustred for use through 07/51/2000, CMB 0651-0032

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ACTION FOR UTILITY OR

Number

First Named Inventor

| DESIGN   | First Marineo Inventor . Studium Will                   |   |  |
|--|---|---|--|
| PATENT APPLICATION   | COMPLETE IF KNOWN                                       |   |  |
| (37 CFR 1:63)  | Application Number                                      |   |  |
| Declaration Declaration  | Filing Date   | HEREWITH                                  |  |
| Submitted OR Submitted after Initial With Initial Filling (surcharye   | Art Unit  |   |  |
| Fillrig (97 CFR 1.16 (e)) required)  | Framiner Name   |   |  |
|  |   |   |  |
| I hereby declare that:   |   |   |  |
| Each inventor's residence, mailing address, and cidzenship are   | as stated below next to th                              | elr name.                                 |  |
| I bolieve the inventor(s) named below to be the original and first   | t inventor(s) of line subject                           | maller which is daimed and for            |  |
| which a patent is sought on the invention entitled:  |   |   |  |
| HYBRID SPACE-TIME DIVERS   | ITY BEAM FORMIN   | G METHOD                                  |  |
|  | •   |   |  |
| ·  |   |   |  |
|  | e Invention)  |   |  |
| the specification of which   |   |   |  |
| is attached horeto   |   |   |  |
| OR   |   |   |  |
| was filed on (MM/DD/YYYY)  | as United States App                                    | dication Number or PCT International      |  |
| Application Number and was amend   | sed on (MINIDIDITITY)                                   | (if supilicalite):                        |  |
| I hereby state that I have reviewed and understand the conten  |   | pecification, including the claims, as    |  |
| amended by any amandment specifically referred to above.   |   |   |  |
| I acknowledge the duty to disclose information which is ma   | iterial to patentability as d                           | lefined in 37 CFR 4.56, including for     |  |
| continuation in-part applications, material information which is   | recenne avallable between<br>etton-in-part application. | see the state of the base of breef ship   |  |
| The service of the se | (a) (d) or (f), or 365(b) of                            | any foreign application(s) for patent,    |  |
| inventor's or plant breader's rights certificate(s), or 365(a) of country other than the United States of America, Tetad below   | and have sign identified the                            | PIDW. DV (JIMCKINU UID DUX:4) IY IVIQID   |  |
| application for patent, inventor's or plant breeder's rights certi-  | Heate(s), or any PCT intern                             | national application having stilling date |  |
| before that of the application on which priority is claimed.  Prior Foreign Application Foreign Fil  | ing Date Priori   | y Cartiflet Copy. Attached?               |  |
| Numberis) Country (MM/DD/  | YYYY) Not Cial  |   |  |
| PCT/CA2009/001747 WIPO 11/18/2003  | ³   |   |  |
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| 60/427,227 US 11/19/2003   |   | *** · II · · II · · · II · · · · · · · ·  |  |
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| 60/427,227 US (1)/19/200   |   |   |  |

Inis conscion of information is required by 35 U.S.C. 113 and 37 CFR 1.83. The information is required to obtain or retain a benefit by the public which is in 15 (and by the UEXTO to proceed) an application. Confidentially is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1 14 This millerlian is estimated in Statistic 11 inhurses in complete the public properties and submitting the completed application from to the USYTO. Three will wary depending upon the individual case. Any comments on the issuand of liable you require to complete this form and/or neckating title burden, chould be cent to the Chief Information case. Any comments on the issuand of liable you require to complete this form and/or neckating title burden, chould be cent to the Chief Information case. Any comments of the insulation of Commerce. P.O. Box 1450, Alexandria, VA ZZ313-1450. DO NOT SHAULES OR COMPLETED Offices. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA ZZ313-1450.

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|  | DECLARATION -   | - Utility or Dec                       | ign Patent App                  | lication                         |  |
|--|---|--|---------------------------------|----------------------------------|--|
| correspondence to:   | The address<br>associated with<br>Customer Number.                        | 252                                    | 35                              | OR 🔲                             | Correspondence<br>address below              |
| Name   |   |  |                                 | •                                |  |
| Address  | ••  |  |                                 |                                  |  |
| Cily   |   | · ·                                    | Slate                           | ·.                               | ZIP  |
| Country  | Tel   | ephono                                 |                                 | Fax                              |  |
| I hereby declare that all state<br>and belief are believed to<br>chatoments and the like so re<br>felse statements may jeopar  | he true; and further<br>made are punishable b<br>dize the validity of the | that these state<br>v (ine or imprisor | ment or both wil                | e with the long<br>den 18 U.S.C. | owiedge that willium talse                   |
| NAME OF SOLE OR FIRST  |   | ☐ A pe                                 | tition has been file            | d for this unsig<br>Name or Sum  | ned Inventor                                 |
| Given Name (first and middl  | e (it enyl)   |  | YU                              | Name of Sund                     | ane .  |
| Invontor's Signature   | Shiqua  | in w                                   |                                 | <u> </u>                         | Date 12/05/200                               |
| Residence: City  | State (7)   |  | Country                         | Citize                           | nehip<br>DA                                  |
| Malling Address  |   |  |                                 |                                  | ,  |
| 108C CRAIG HENRY DRIVE   | ٠.  |  |                                 |                                  | <i>p</i>                                     |
| and at a date must be a para!  |   |  |                                 |                                  | Country                                      |
| City .   | State   |  | , <b>Z</b> Ip                   |                                  | ,  |
| City   | State<br>ONTARIO  |  | icso ere                        |                                  | CANADA .                                     |
| City   | ONTARIO   |  | iczo ele                        | has been filed                   | CANADA for this unsigned Invente             |
| City<br>NEPEAN   | ONTARIO   |  | IC2G 6L8                        | has been filed<br>Name or Suchs  | for this unsigned Invente                    |
| City<br>NEME OF SECOND INVEN<br>Given Name (first and midd   | ONTARIO   |  | IC2G 6L8                        |                                  | for this unsigned Invento<br>me              |
| City<br>NEME OF SECOND INVEN<br>Given Name (first and midd   | ONTARIO   |  | iczo eLe  A petition Family     |                                  | for this unsigned Invente                    |
| NAME OF SECOND INVENCEMENT NAME OF SECOND INVENCEMENT OF SECOND IN | ONTARIO   |  | iczo eLe  A petition Family     | Name or Sucha                    | for this unsigned Invento<br>me              |
| City NEME OF SECOND INVEN Given Name (first and midd Juliu Inventor's Signature Residence: City  | ONTARIO  ITOR:  [c [if any])  |  | A Retition Family               | Name or Sucha                    | for this unsigned Inventoring  Date  Enship  |
| City NEME OF SECOND INVEN Given Name (first and midd Juliu Inventor's Signature Residence: City  | ONTARIO  ITOR:  [c [if any]]  State                                       |  | A Retition Family LITVA Country | Name or Sucha                    | for this unsigned Inventoring  Date  Enship  |
| NAME OF SECOND INVENTION NAME OF SECOND INVENTION INVENT | ONTARIO  ITOR:  [c [if any]]  State                                       |  | A Retition Family LITVA Country | Name or Sucha                    | for this unsigned Inventoring  Date  Enship  |
| NAME OF SECOND INVENTION O | ONTARIO  ITOR:  [c [if any]]  State                                       |  | A Retition Family LITVA Country | Name or Sucha                    | For this unsigned Inventor me  Date  Princip |

(Page 2 of 2)

PTC/SB/01 (09-04)
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|--|---|-----------------------------|-------------------|--------------------|------------|---------------|---------------------|
| DECLARATION FOR UTILITY OR DESIGN  |   | TY OR                       | Attorney Do       |                    | GLH08      | 896551        |                     |
|  |   |                             | First Named       | Inventor ·         | Shiqua     | ı WU          | · ·                 |
| PATENT AF  |   | N                           | COMPLETE IF KNOWN |                    |            |               |                     |
| (37 CF   | (37 CFR 1.63)   |                             | Application I     | Number             |            |               |                     |
| Declaration Submitted OR Declaration Submitted after Initial   | ed after Initial  | Filing Date                 |                   | HEREY              | νιτн       |               |                     |
| With Initial   | ····  |                             | Art Unit          |                    |            |               |                     |
| Limin  |   |                             | Examiner Na       | ame                |            | ·· ····       |                     |
| I hereby declare that:  Each inventor's residence, mailing address, and citizenship are as stated below next to their name.  I believe the inventor(s) named below to be the original and first Inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:  HYBRID SPACE-TIME DIVERSITY BEAM FORMING METHOD  |   |                             |                   |                    |            |               |                     |
| Ľ  |   | (Title of the               | /                 |                    |            |               |                     |
| the specification of which   |   | ( וישוט פטוז                | invenuon)         |                    | .,         |               |                     |
| is attached hereto   | •   | •                           |                   |                    | •          |               | •                   |
|  |   |                             |                   |                    | ·          | •             | ·                   |
| OR   |   |                             | -n                |                    |            |               | :                   |
| was filed on (MM/DD/YYYY) as United States Application Number or PCT International   |   |                             |                   |                    |            |               |                     |
| Application Number and was amended on (MM/DD/YYYY)   |   |                             |                   |                    |            |               |                     |
| I hereby state that I have revie   | wed and under   | stand the contents          | of the above      | identified s       | pecificati | on, including | the claims, as      |
| amended by any amendment:  | •   |                             |                   |                    |            | •             | MATERIAL CONTRACTOR |
| I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.  |   |                             |                   |                    |            |               |                     |
| I hereby claim foreign priority  | benefits unde   | r 35 U.S.C. 119(a)          | )-(d) or (f), o   | or 365(b) of       | any fore   | ign applicati | on(s) for patent.   |
| I hereby claim foreign phority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box; any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filling date before that of the application on which priority is claimed. |   |                             |                   |                    |            |               |                     |
| Prior Foreign Application Number(s)  | Country   | Foreign Filing<br>(MM/DD/YY |                   | Priori<br>Not Clai |            | Certified C   | opy Attached?       |
| PCT/CA2003/001747  | WIPO  | 11/18/2003                  |                   | ' [                | 1          |               | Ž                   |
| 60/427,227   | υs  | 11/19/2002                  |                   |                    |            |               |                     |
| Additional foreign ap  | plication number  |                             |                   | priority dat       | a sheet P  | TO/SB/02B a   | attached hereto.    |
|  |   | · (Page 1                   | of 21             |                    |            |               |                     |

[Page 1 of 2]

This collection of Information is required by 35 U.S.C. 115 and 37 CFR 1.53. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual; case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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| NEPEAN               | ONTARIO                                   | CANADA                             | CANADA                                  |  |
|----------------------|---|------------------------------------|---|--|
| Mailing Address      |   |                                    |   |  |
| 108C CRAIG HENRY DI  | RIVE                                      |                                    |   |  |
| City                 | State                                     | Zip                                | Country                                 |  |
| NEPEAN               | ONTARIO                                   | K2G 6L8                            | CANADA                                  |  |
| NAME OF SECOND       | INVENTOR:                                 | A petition ha                      | s been filed for this unsigned inventor |  |
| Given Name (first an | d middle [if any])                        |                                    | ne or Surname                           |  |
| John                 |   | UTVA                               |   |  |
| Inventor's Signature | both 6                                    | Aue                                | Date Way 17, 2019                       |  |
| Residence: City      | State                                     | Country                            | Citizenship                             |  |
| ALMONTE              | ONTARIO                                   | CANADA                             | CANADA                                  |  |
| Mailing Address      |   |                                    |   |  |
| 73 HAROLD STREET     |   |                                    |   |  |
| City                 | State                                     | Zip                                | Country                                 |  |
| ALMONTE              | ONTARIO                                   | K0A 1A0                            | CANADA                                  |  |
| Additional inventors | or a legal representative are being named | on the supplemental sheet(s) PTO/S | B/02A or 02LR attached hereto.          |  |
|                      |   |                                    |   |  |

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| STAT   | EMENT UNDER 37 CFR 3.73(b)   |   |
|--|--|---|
| Applicant/Patent Owner: Shiquan WU and John L  | LITVA  |   |
| Application No./Patent No.: FILED HEREWITH   | Filed/Issue Date:  |   |
| Entitled: HYBRID SPACE-TIME DIVERSITY BEA  | AM FORMING METHOD  |   |
| TENXC WIRELESS, a corporation (Name of Assignee)   | (Type of Assignee, e.g., corporation, partnership, universit   | ty, government agency, etc.)                                |
| states that it is:  1.  the assignee of the entire right, title, and ir  | nterest; or  |   |
| 2. an assignee of less than the entire right, to The extent (by percentage) of its ownership.  |  |   |
| in the patent application/patent identified above b  | by virtue of either:   |   |
| A. An assignment from the inventor(s) of the in the United States Patent and Trademark thereof is attached.  OR                              | e patent application/patent identified above. The<br>k Office at Reel, Frame   | e assignment was recorded, or for which a copy              |
|  | patent application/patent identified above, to the   | he current assignee as shown                                |
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| 3. From: The document was recorded in the l  | To: United States Patent and Trademark Office at   |   |
| Reel, Frame  | , or for which a copy thereof  | is attached.  |
| Additional documents in the chain of title   | e are listed on a supplemental sheet.  |   |
| Copies of assignments or other documents in [NOTE: A separate copy (i.e., a true copy of Division in accordance with 37 CFR Par MPEP 302.08] | n the chain of title are attached. the original assignment document(s)) must be rt 3, if the assignment is to be recorded in the r | submitted to Assignment<br>records of the USPTO. <u>See</u> |
| The undersigned (whose title is supplied below) is   | is authorized to act on behalf of the assignee.  | 05.17.2005  |
| Signature  |  | Date  |
| CAROL W. BURTON, ESQ.  |  | 03.454.2454   |
| Printed or Typed N<br>ATTORNEY, REG. NO. 35,465  | lame   | Telephone Number  |
| Title  | 1.00   |   |

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## POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b). I hereby appoint: Practitioners associated with the Customer Number: 25235 OR Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used): Name Registration Name Registration Number Number as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b). Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to: 25235 The address associated with Customer Number: OR Firm or Individual Name Address City State Country Telephone Email Assignee Name and Address: TENXC WIRELESS, 350 TERRY FOX DRIVE, SUITE 310, OTTAWA, ONTARIO, K2K 2W5, CANADA A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed. SIGNATURE of Assignee of Record The individual whose signature and title is supplied below is authorized to act on behalf of the assignee Signature Date 1 Name

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Title